Appl. No. 09/742,157
Amdt. sent September 14, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2152

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-22 (canceled)

1   23. (Currently amended) A storage system comprising:

2   a plurality of I/O ports for connection to a communication network, the I/O ports

3 receiving write requests;

4   an array of media for storing information, the array comprising a plurality of disk

5 storage units organized into a plurality of logical disks~~coupled by data paths to a communication~~

6 ~~link, and thereby to a host system, wherein the host system establishes communications with the~~

7 ~~storage system using the communication link and the data paths~~;

8   a plurality of data paths for selective connection between the logical disks and the

9 I/O ports; and

10   ~~wherein the storage system allocates~~an allocator to allocate the data paths

11 between the logical disks and the I/O ports based upon a data rate capability of the data paths to

12 thereby provide a desired quality of service.

1   24. (Previously presented) A storage system as in claim 23 wherein the array of

2 media includes media having different operational characteristics, and wherein the storage

3 system allocates individual ones of the media to individual ones of the data paths to provide the

4 desired quality of service.

1   25. (Previously presented) A storage system as in claim 23 wherein a processor

2 in the host system establishes a data path between the storage and the network connection; the

3 data path being assigned a sufficient data speed to accommodate the desired quality of service.

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1   26. (Previously presented) A storage system as in claim 24 wherein the array of

2   media comprise hard disk drives, and the different operational characteristics comprise different

3   speeds of operation.

1   27. (Previously presented) A storage system as in claim 24 wherein the storage

2   system allocates ones of the array of media based upon a data rate capability of the media and a

3   data rate capability of the communication link.

1   28. (Previously presented) A storage system as in claim 24 wherein the desired

2   quality of service comprises a specified bandwidth and wherein the storage system allocates

3   individual ones of the media based upon the guaranteed bandwidth.

1   29. (Currently amended) [[An]]A storage system comprising:

2   an array of storage media; [[and]]

3   a plurality of I/O ports, each having a network connection operable to connect to

4   the array with a desired quality of service;

5   a plurality of data paths ~~coupling the network connection~~to selectively couple the

6   I/O ports to the storage media~~array~~, wherein a data path between one or more of the ~~array~~

7   storage media and the network connection is selected to provide sufficient data speed to

8   accommodate the desired quality of service.

1   30. (Currently amended) A method for allocating resources in a storage system,

2   the storage system comprising an array of storage devices coupled to a network connection by

3   data paths, the method comprising:

4   establishing a data path between a storage device of the array and the network

5   connection; the data path being selected to provide a sufficient data speed based upon data

6   capacity of the storage device and data rate capability of the network connection; and

7   selecting ~~ones~~a storage device of the array based upon the data capacity and the

8   data rate capability of the network connection.

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1   31. (Previously presented) The method of claim 30 wherein the step of

2 establishing the data path comprises assigning a data path having a sufficient data speed to

3 accommodate the desired quality of service.

1   32. (Previously presented) The method of claim 30 wherein the step of

2 establishing a data path comprises searching for unallocated data communications resources to

3 accommodate a data capacity of the array.

1   33. (Previously presented) The method of claim 30, wherein the step of selecting

2 ones of the array comprises searching for unallocated ones of the array having a sufficient data

3 capacity to match a data rate capability of the network connection.